



WATER-RIGHT DOCKET

Appomattox Court House National Historical Park

Docket No: 1

WATER SYSTEM

Supporting Hydro Data

03-25-1960: memorandum re: measuring water consumption; 1960



**UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE**

**Region One
Richmond 20, Virginia**

MAR 25 1960

Memorandum

**To: Superintendent, Appomattox Court House National
Historical Park**

From: Regional Chief of Operations

Subject: Measuring Water Consumption

Your memorandum of March 17 stating your desire to determine water consumption is acknowledged.

Judging from the water system plan (5307-6) it appears that a deep well turbine was installed and discharges approximately between 50 and 65 gallons per minute for the off and on pressures of 15 and 25 p.s.i. This will require a 1½" disc water meter, which should be installed between the pump and the pressure tank. A good meter is the Trident, which is manufactured by the Neptune Meter Company of 22-42 Jackson Avenue, Long Island City 1, New York. We do not have a price on a single unit, but the City of Richmond pays about \$111 for the disc mentioned in large lots. If you are well acquainted with officials in Lynchburg and they use Neptune Meters, maybe they would call you on at their contract price.

Another method of measuring pumpage would be with an electric time meter which would be tapped on to the pump meter leads so that it would register the time the pump operated. The average discharge of the pump would have to be determined for the pressure ranges in use, so that it could be multiplied by the registered time. This would be a much cheaper arrangement, but would not be so accurate because the pump you have has a variable discharge.

If you decide to go ahead with this installation and wish us to do so, we will be glad to have one of our engineers run over and assist you in planning a proper installation. It may be necessary to run a check test on the pump to be sure that we are in the right discharge bracket before ordering a meter.

TSKlener:mr
General
Daybook

(SIGNED)
H. Robert Smith
Regional Chief of Operations



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Appomattox Court House National Historical Monument
Appomattox, Virginia

November 10, 1952

D5039Ape

REGION ONE
NOV 12 1952
Reg. Dir.
Asst. Reg. Dir.-Adm.
Asst. Reg. Dir.-Oper.
Asst. Reg. Dir.-P&C
Adm. Officer
Land Ac.
Architecture
History
Archaeology
Soil Conserv.
Forestry
Conservation
Land and Rec.

JBK

Memorandum

To: Regional Director

From: Superintendent, Appomattox Court House National Historical Monument

Subject: Area Water Supplies

As requested by Mr. O'Neil in his memorandum dated October 17, 1952, we are furnishing below for your records, supplementary information on the water supply system for Appomattox Court House National Historical Monument.

Supply

One (1) drilled well; total depth 267 feet; diameter, six (6) inches; casing - galvanized iron to bed rock; distance from surface to water level when well is idle - 31 feet; capacity of well as determined by test - 50 gallons per minute; quality of water - very good; contains excess iron. Future treatment - the excess iron content has not affected quality of water to date. If and when iron precipitation and staining become apparent, it is proposed to install an iron filter unit at the pump house.

Treatment

None at present; see note above on quality of water.

Remarks (General Information)

The Water Supply System for the Monument is covered by approved drawings NM-ACH-5307A.

Pump Data: Deming Deep Well Turbine Pump, water lubricated, manufactured by The Deming Co., Salem, Ohio. Serial #T-10766, rated (normal speed) 1750 R.P.M. Pump powered by electric motor manufactured by U. S. Electrical Motor Company, Milford, Connecticut; rated 3 H. P.; voltage 115-230, single phase; serial #722403.

The Water Distribution System is a combined pneumatic and pressure type. For ordinary use to residences and office, etc., water is supplied from a 500-gallon galvanized pressure tank located at the Well House. For emergency fire fighting, water is stored in a 24,000 gallon concrete storage tank built inside the reconstructed Plunkett-Meeks Stable. Water flows by gravity through the 4-inch cast iron water mains and is pumped out by the Monument fire truck at fire hydrants located at four points on the water lines. Water is held in the 24,000 gallon storage tank by pressure on the line and is released by a butterfly-type valve when pressure in line drops.

Hubert G. Gurney
Superintendent

NOTE - Unions to be located by installing plumber Pressure Switch & Gauge at top of Pressure Tank.

SKETCH OF PIPING IN PUMP HOUSE
 APPOMATTOX COURTHOUSE N.H.M.

APPOMATTOX COURTHOUSE NATIONAL HISTORICAL PARK

Following information taken from Fixed Property Record, Regional Office:

Water System: Consist of one deep well 267 feet, drilled 1947; pump and accessories; 500 gallon galvanized pressure tank, 2200 linear feet 4" cast iron water mains; 4 fire hydrants; 360 linear feet 2" water mains; 200 linear feet 1" water mains. See Drawing No. NM-ACH 5307-C, Sheet 1, dated 1947.

Added Construction: 24,000 gallon concrete storage tank, located in Plunkett Meeks Stable, Village Area. Contractor E. G. Tegethoff, Appomattox, Virginia. See Drawing No. NM-ACH 5307-C, Sheet 2, dated 1949.

PROJECT CONSTRUCTION
CERTIFICATE OF COMPLIANCE

REGION ONE
JAN 10 1950

Reg. Dir.	
Assoc. Reg. Dir.	
Asst. Reg. Dir.	
Adm. Officer	
Land. Arch.	
Architecture	
Engineering	☒
History	
Archeology	
Coal Geology	
Conservation	
Concessions	
Land and Rec.	
Auditor	

Area: Appomattox Court House National Historical Monument

Name of Project: Water Supply System

Location: Village Area

Drawing Number NM-ACH-5307A; NM-ACH-2025

Construction by: Day Labor 14X1000.715 National Park Service

14X1029.021 Roads, Trails, Util. & Bldgs.

Construction: Started July 1941 Completed: December 14, 1949

General Supervision by: Hubert A. Gurney, Superintendent

Changes from Approved Drawings: None

REMARKS:

This project is a complete installation. First work on the project was drilling the well at the Utility Area. This portion of the water supply system was undertaken under an approved CCC job. Total depth of well is 267 feet; cost \$1,019.00. Work on the project was suspended during World War II and resumed in 1948. The completed system includes, in addition to the well, a concrete block well house, deep well pump and accessories, 500-gallon pressure tank, 2200 linear feet of 4-inch cast iron water mains, 4 fire hydrants, a 23,000 gallon concrete storage tank (for fire fighting purposes) and a restored stable building which serves as cover structure for the concrete tank. Cost of the water supply system, excluding the \$1,019.00 reported above for drilling the well, was \$12,076.00.

I certify that this project has been completed in accordance with the approved drawings and specifications and authorized changes.

Hubert A. Gurney
Superintendent

January 9, 1950
Date

Sweeney
Kiern
Lide
C₃

February 1, 1949.

MEMORANDUM for the Superintendent,
✓ Appomattox Court House National Historical Monument.

The inspection of the deep well installation made by Engineer R. F. Sweeney January 20, 1949, indicates that the pumping equipment is in satisfactory working order.

The pump was tested for delivery by measuring the volume delivered to grade at the pump house against the 100 ft. of head in the well. Since the pressure tank had not been installed, no facilities were available to test against full head of 200 ft. Three adjustments of the impeller clearance were made with maximum delivery established at 50 gal. per min. The test was then run for 15 minutes. The pump continued to deliver this flow evenly without surge.

During the test the motor operation appeared normal. The stuffing box is tight and does not develop friction heat. All appurtenances as specified have been furnished.

It is recommended that the pumping equipment be accepted with the understanding that the contractor shall return to make further test and adjustment when the pressure tank has been installed. This is to assure that the stuffing box and impeller adjustments are correct under the condition of maximum head, and that no labor develops in the motor under the greater load.

For your information the depth of water in the well was 31 ft. below ground level when the test began. Following the final test, in which pumping was continuous for 15 minutes, the water level was checked at 22 ft., or 18 ft. above the suction bowl.

Bulletin 4700-S, describing the Deming deep well turbine pump, is attached for your information. It is suggested that you request the contractor to secure from the manufacturer and furnish to you complete operating instructions for your specific pump (Deming Fig. 4700 serial No. 10766).

Note on page 19 of the bulletin a description of all parts for the turbine. Part A-17, stuffing box drain, should lead out of the discharge head and drain to the floor and not back into the well as shown on page 19. The contractor has bent this tube up to the priming tank. It would be preferable to bend it down toward the floor.

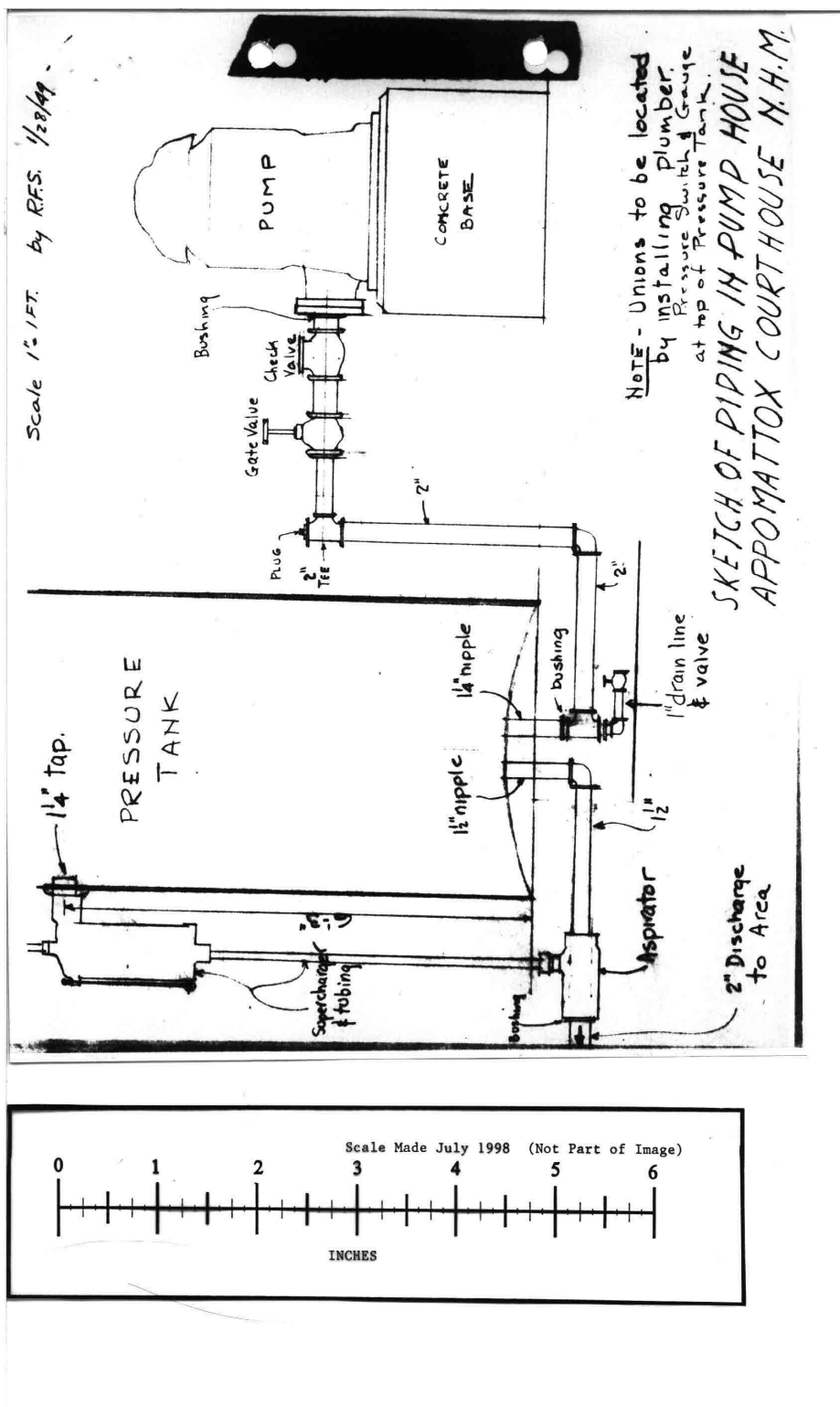
The contractor by his letter of September 21, 1948, stated that he would furnish 3" gate valve and 3" check valve for the supply line. This is more than ample to handle the required flow of 25 gal. per min. Since the specification reads "full size," you may accept 2½" check valve and gate valve as full size.

(Signed)

Thomas J. Allen,
Regional Director.

Enclosure 817.

ALL: TWA
BUT.
DALL



Docket Information

Number of Documents in Docket 9

Documents Dated from 1/28/1949 to 3/25/1960

Docket Compiled: 1/28/2011